

the amount of radiation dose that patients exposed to during clinically indicated CCT.

**Methods:** All patients were scanned using retrospective gating on a 64-slice CCT, for clinically indicated reasons, where coronary CT angiogram and calcium score measurements were performed. The amount of radiation was calculated from different parameters in millisievert (mSv).

**Results:** 1287 patients were scanned with mean age of  $52 \pm 13.2$  y, 65% males, and 35% females. Chest pain was the indication in 80% of cases. There mean radiation dose was  $15 \pm 10.4$  (mSv). Patients with body mass index (BMI)  $\geq 35$  received more radiation compared to those with BMI  $< 30$  was,  $15.3 \pm 9.3$  vs.  $14.6 \pm 7.4$  (mSv),  $p < 0.002$ . Patients who had coronary bypass surgery (CABG) received significantly higher dose of radiation,  $22.2 \pm 9.3$  vs.  $14.4 \pm 10.4$  (mSv),  $P < 0.0001$ .

**Conclusion:** Overweight patients and patients who underwent CABG are exposed to significantly higher radiation dose during CCT. Measures have to be applied to minimize the radiation dose during CCT.

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#### SHA 004. Diagnostic valve of nitrate enhanced Tc-99m sestamibi gated myocardial spect in myocardial viability: Prospective analysis

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**Objective:** To assess myocardial viability with nitrate enhanced Tc-99m sestamibi Gated Single Photon Emission Computed Tomography (GSPECT).

**Material and methods:** Prospective study of 48 patients with coronary artery disease and previous myocardial infarction was done from January 2009 to January 2010. Patients underwent Tc-99m sestamibi GSPECT at rest after injection of 25–30 mCi of Tc-99m sestamibi intravenously. Next day nitrate enhanced Tc-99m sestamibi GSPECT was done with same dose after administration of sublingual nitrate 15 min prior to radiopharmaceutical injection. The images were interpreted by using 20 segment model including wall motion analysis.

**Results:** Total 960 segments in 48 patients were assessed. Viability improvement with nitrate study was 13.11% for LAD segments, 3.37% for RCA segments and 16.9% for LCx segments. Paired *T*-test showed  $p < 0.05$  vs. baseline which was significant at 5% significance level.

Viability improvement with nitrate gated study was 7.14% for LAD segments, 0.4% for LCx, and none for RCA. Total percentage improvement compared to baseline was 2%. Nitrate gated study *p* value was insignificant vs. baseline.

Combination of both studies: baseline (SPECT + Gated) and nitrate enhanced (SPECT + Gated) showed *p* value of  $< 0.05$ .

**Conclusion:** Nitrate augmented Tc-99m sestamibi myocardial SPECT improves detection of viable myocardium.

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#### SHA 005. Echocardiographic evaluation of the impact of the different tricuspid valve repair techniques on the annular geometry and right

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**Objective:** To assess echocardiographically the impact of the changes in the annular geometry after different techniques of tricuspid valve repair for tricuspid valve regurgitation on the preservation and recovery of right ventricular function and the recurrence.

**Materials and methods:** 124 consecutive patients who underwent tricuspid valve repair at our institution were studied. 73% were females. Mean age was  $48.3 \pm 15.3$  years. 55% had NYHA class III/IV. Concomitantly, 110 had mitral and 33 had aortic valve surgery. Repair techniques were bicuspidization 42, ring annuloplasty 28, De-Vega annuloplasty 14, Kay-repair 11, pericardial strip annuloplasty 12, commissurotomy 4 and non-standard stitch techniques 13. Mean follow-up period was  $17.9 \pm 25.6$  months.

**Results:** No patient had residual severe tricuspid regurgitation (TR); 19 had trivial to mild TR and 7 had mild tricuspid stenosis. During the follow up period, 7 patients developed severe recurrent TR, three with ring annuloplasty, two with non-standard stitch repair and one each with De-Vega and bicuspidization techniques. Pre-operative, intra-operative and post-operative follow-up echocardiograms were done: (1) for severity of TR; (2) for assessment of tricuspid annular dilatation, the dimensions were measured in three triangular axes; (3) right ventricular systolic function was assessed using Tricuspid Annular Plane Systolic Excursion (TAPSE) and two-dimensional Fractional Area Change of RV (2D FAC) methods.

**Conclusion:** Short term results of all tricuspid valve repair techniques remain satisfactory. Annular dilatation and right ventricular dysfunction plays a major role in the development of recurrent TR. Bicuspidization techniques, in our experience is simple, safe and efficient in achieving tricuspid competence and preserving RV function.

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#### SHA 006. The role of cardiac imaging modalities in pre operative selection of patients for trans-catheter aortic valve implantation (TAVI)

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**Objectives:** TAVI is an emerging technique for treating non operable patients with severe aortic stenosis. We report our experience in using different cardiac imaging modalities in selecting patients for TAVI.

**Methods:** All patient who were eligible for TAVI therapy underwent detailed transthoracic echocardiography, where peak (PG), mean (MG) gradients, aortic valve area (AVA), aortic annulus size (AA), ejection fraction (EF), severity of mitral regurgitation (MR) were assessed. Cardiac CT scan to measure size of aortic root, size of peripheral vessels, as well as study aortic